

Patent Claims

1. A cargo-hold floor for aircraft, which is received on a grid structure (1) comprising longitudinal members (2) and crossmembers (3) and in which are provided
5 exchangably arranged floor plates (80), roller conveyor apparatuses (50) and also lashing points (10) for the fastening of cargo articles, such as pallets, containers or vehicles and articles of equipment, and
10 with locking units (98) which comprise lock elements (100, 143) capable of being folded open and of being folded away, and lashing points (10) being received in a stationary manner on the grid structure (1) at intersection points of the longitudinal members (2)
15 with the crossmembers (3), characterized in that both roller conveyor apparatuses (50) integrated into the cargo-hold floor and locking units (98, 131) can be received in their erected operating position and in their countersunk drive-over and stowage position at
20 the installation location which always remains the same in the cargo-hold floor.

2. The cargo-hold floor as claimed in claim 1, characterized in that the roller conveyor apparatuses
25 (50) and the locking units (98, 131) can be transferred, without a tool, from their erected operating position into their countersunk drive-over and stowage position.

30 3. The cargo-hold floor as claimed in claim 2, characterized in that lashing point housings (12) and foundation housings (52) of roller conveyor apparatuses (50) have bearing strips (84) for floor plates (80) and/or locking units (98, 131), said bearing strips
35 being in alignment with a top edge (4) of the grid structure (1).

4. The cargo-hold floor as claimed in claim 3, characterized in that tread-proof elastic filling

bodies (32) are contained in the lashing point housings (12).

5. The cargo-hold floor as claimed in claim 2, characterized in that the lashing point housings (12) contain a lashing point shaft (14), on which a receptacle (16) allows the fastening of lugs (20, 22) or additional adaptors (24, 26) by means of a plug connector (18).

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6. The cargo-hold floor as claimed in claim 5, characterized in that the lugs (20, 22) in the lashing point housings (12) can be moved omnidirectionally about two intersecting axes mounted in each case on both sides.

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7. The cargo-hold floor as claimed in claim 3, characterized in that floor plates (80) can be fastened exchangably via fastening elements (56, 86) to bearing strips (84) of the lashing point housings (12) and to the bearing strips of the foundation housings (52) of the roller conveyor apparatuses (50) so as to overlap these bearing strips.

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8. The cargo-hold floor as claimed in claim 7, characterized in that lock carriers (98) are integrated into the floor plates (80).

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9. The cargo-hold floor as claimed in one or more of the preceding claims, characterized in that the roller conveyor apparatuses (50) have foundation housings (52) which are connected to the grid structure (1) via fastening elements (54), and the foundation housings (52) contain bearing surfaces (53), on which upper parts (51) of the roller conveyor apparatus (50) lie in the stowed state.

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10. The cargo-hold floor as claimed in one or more of the preceding claims, characterized in that the lock

carriers (98) comprise foundation pits (96), into which the lock carriers (98) can be received in the stowed state.

5 11. The cargo-hold floor as claimed in claim 1, characterized in that the roller conveyor apparatuses (50) and the lock carriers (98) have smooth bottom surfaces (58) which can be driven over or walked on in the stowed state of the roller conveyor apparatuses
10 (50) and of the lock carriers (98).

12. The cargo-hold floor as claimed in claim 7, characterized in that the floor plates (80) have a seat-rail box profile (82) which, on its top side
15 delimiting the cargo-hold floor, has a reception profile, running peripherally around the floor plate (80), for the detention of articles of equipment.

13. The cargo-hold floor as claimed in claim 1, characterized in that a plurality of lashing points (10) of the cargo-hold floor can be covered with a connecting plate (40) having a force engagement point, the connecting plate (40) being connected to these
20 lashing points (10) via heavy additional adaptors (26).

25 14. The cargo-hold floor as claimed in claim 1, characterized in that the roller conveyor apparatuses (50) and/or the lock carriers (98) have a fastening unit (64, 106), the release grip (65) of which is
30 accessible both from the underside and from the top side of the roller conveyor apparatuses (50) or of the lock carriers (98).

35 15. The cargo-hold floor as claimed in one or more of the preceding claims, characterized in that a system height (5) between the top side (90) of the floor plate (80) and top sides of the roller conveyor apparatuses (50) located in the erected operating position amounts to approximately 30 mm.

16. The cargo-hold floor as claimed in claim 3, characterized in that foundation housings (52) of roller conveyor apparatuses (50) have drainage orifices (55) which are arranged below the top edge (4) of the grid structure (1).

17. The cargo-hold floor as claimed in claim 16, characterized in that, below the top edge (4) of the grid structure (1), drainage funnels (99) are arranged, which have an exchangeable filter insert, extractable after the removal of a floor plate (80).

18. The cargo-hold floor as claimed in claim 16, characterized in that collecting troughs (57) for drainage fluid are arranged below the top edge (4) of the grid structure (1) and have a trough bottom running at an inclination from the drainage orifices (55) to the drainage funnel (99).

19. The cargo-hold floor as claimed in claim 1, characterized in that locking units (131) and guide units (133) which can be used for military purposes are arranged parallel to the longitudinal members (2) of the grid structure (1), the locking units (131) which can be used for military purposes being assigned a motor/gear unit (155) actuating the lock (143).

20. The cargo-hold floor as claimed in claim 19, characterized in that the locks (143) of the locking units (131) which can be used for military purposes have a long-hole guide (148) through which passes a lock-stroke shaft (145) about which the lock (143) can be actuated by means of a gear spindle (147).

21. The cargo-hold floor as claimed in claim 19, characterized in that the motor/gear units (155) received in alternating sequence parallel to the longitudinal members (2) of the grid structure (1) and

actuating the locks (143) are coupled to one another via synchronization shafts (153).

22. The cargo-hold floor as claimed in claim 21,
5 characterized in that the synchronization shafts (153) for further motor/gear units (155) are coupled to adjacent motor/gear units (155) in each case via telescope couplings (154).